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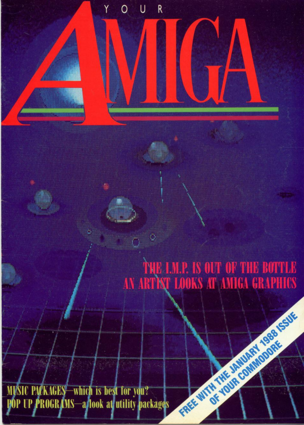

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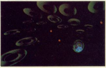

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Knight ORC

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BY MARK RILEY
AEGIS
Sonix
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Aegis Sonix

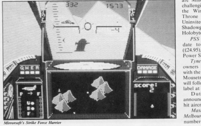
Amiga News

The Personal Computer World Show saw the announcement of a huge range of new games for the Amiga and there's lots more besides. Anne Owen brings us the latest news.

The PCW show proved that software houses are taking the Amiga seriously, at last.

Ocean showed ECO. Developed by Denton Design specifically for 16 bit machines, ECO simulates an ecosphere, a self-supporting natural environment which is depicted in 3D scrolling landscapes. The objective of the game is survival. Beginning life as an amoeba, the player must evolve through fish and fauna stages, eventually achieving human status.

Electrionic Arts contribution to the autumn should be interesting and it's worth remarking that the presence of the company in the UK has resulted in some sensible pricing for software which was originally imported and sold at inflated prices. For instance Arctic Fox, Adventure Construction Set and Marble Madness are now £19.95; Skyfox and Seven Cities of Gold are £14.95. Instant Music, Chessmaster 2000, Bard's Tale and Deluxe Print are £24.95, as is new release Earl Weaver Baseball. Deluxe Paint 2, Deluxe Video and Deluxe Music Construction Set are £69.95. Skidding in for the winter months will be new releases Formula 1 Racing and Test Drive.



Mirrorsoft's Strike Force Harrier

Microprose confirmed Ultima III and IV and Autoduel and added Ogre to their list of Amiga games.

Interceptor's Pandora label will have an Amiga version of Into the Eagle's nest soon.

Hewson released their first 16 bit products and expressed their satisfaction with the conversion of Uridium to the Amiga.

Mirrorsoft have more Amiga games on the way with Mean Streak and Strike Force Harrier (renamed High Roller on the Mindscape label). A brand new adventure called Bermuda Project is also in the wings as are Mindscape's King of Chicago – challenging Capone for dominance of the Windy City, Sinbad and the Throne of the Falcon, Deja Vu, Uninvited and the occult horrors of Shadowgate. Also on the Spectrum Holobyte label is Gato.

PSS added a 'to be announced' date to Amiga games Spycatcher (£24.95), Leathernecks (£24.95) and Power Struggle (£9.95).

Tynesoft announced that Amiga owners could exercise their joysticks with the October releases of Plutos and Mousetrap. Formula One Grand Prix will follow. All are on the MicroValue label at £14.95.

Dutch company *Aackosoft* announced an Amiga version of their hit aircraft carrier game, Flightdeck.

Mastertronic and sister company *Melbourne House* announced a large number of new games at £14.95 and

£19.95 respectively.

Robtek came up with Extensor and Alien Strike to add to Swooper and the naughty Hollywood Poker. All priced at £19.95.

Anco were showing Emerald Mines, Pinball Wizard, Go Cart Racing and Sprite Designer. There was also Micro Base, Calc and Text.

Nine Tiles had networking for business machines, among them the Amiga 2000.

Precision showed Superbase Professional which offers a high level programming language, a new forms editor to design screen and printed forms to a high level of sophistication and a text editor which is integrated into the database.

There are 200 commands and fully customised systems can be created including new pull-down menus and pop-up selection panels. Price £249.95.

Taurus Impex showed Acquisition 1.3, a much refined version including cut and paste between packages (such as Scribble!).

Pioneer is a low cost version of Acquisition without the programming language. Also from Taurus, the BEST business management integrated accounting system and City Desk.

Nucleus Software showed an Amiga 2000 based supervisory control system. GEFICS, as it is known, manipulates data collected from a logic controller or keyed in. Output is displayed in colour graphics.

Cadvision exhibited X-CAD, a 2D CAD program for Amiga 2000, price £399+VAT. Also for the 2000, Artisan graphics workstation from *Burocare*.

System Architects impressed with their rolling point-of-sale system, again based on the 2000. They also have an interactive training system.

Micro APL announced a new £99.95 price tag for their Amiga APL language and showed Microspan, a self-teach package priced at £49.95.

HBML launches the Sunword £99.95 wordprocessor. Apparently Sunword is highly successful in Europe. Also available was Micro-Illusions' Firepower.

Amiga Centre Scotland had Scot Peterson, President of Byte by Bytes, on their stand demonstrating Sculpt 3D. There was also Animator's Apprentice, Express Paint, AiRT and Doug's Maths Aquarium – the latter a 'different' approach to programming.

Advanced Memory Systems announced that its current PC DTP product, Finesse, will be available on the Amiga.

VideoTitler contains a range of facilities for attractive screen presentations and titling in all screen modes with multiple colours and styles. Amiga fonts and 'polytext' fonts – made up of polygons – can be entered anywhere on screen and moved around at will and IFF pictures, including colour cycling, can be loaded as backdrops. 3D block, thin edge, neon and emboss are among the 20 styles available and the user can DIY new types.

Clip and paste, mirror image, compression, distortion, inversion and tile animation are apparently all possible. VideoSeg, an IFF slide show program, is included. This allows wipes in nine directions, fades and dissolves, block effects such as diamond, checker, drizzle and spiral in and out. Manual and automatic modes are available, parts of slide shows can be selected and accurate timing incorporated.

If your Amiga and your video recorder are thinking of getting together then VideoTitler looks interesting.

If you taped any World Cup matches last Summer '86 then you may have seen Aegis Images in action. Apparently the giant animated logo in the stadium in Mexico City was created with Aegis Images on an Amiga or two!

Aegis' next co-operation is going to be with the CD-ROM technology CD-Interactive. CD-I will retain a CD-ROM drive, audio and video processors, 68070 processor and operating system in one box. CD-I cannot at the moment play live video but can animate the thousands of frames stored. Frames from animation packages such as Aegis Images can be stored on CD-I for playback via the computer.

Already the Sachs Enterprises artists are working for Aegis on storyboards for four CD-I titles: F1 Circuit International Formula One, The Seven Temples of Cortez, Mission Space Station, 20,000 Leagues Under the Sea.

Aegis has standardised its prices for the British market with Sonix at £50, VideoTitler at £60, VideoScape 3D at £125 and Draw Plus at £160 and Animator/Images at £90. Audio Master will cost £40.00.

Aegis is also embarking on PAL program conversions and the translation of manuals for VideoTitler, VideoScape 3D and Aegis Draw Plus for the European market.

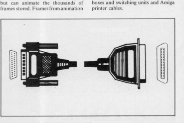
Info-Mat

Bitstream Publishing has come up with a simple but attractive idea, the Info-mat, a cross between a mouse mat and a reference guide. The mat contains a listing of all Amiga DOS commands on one side with explanations and syntax while the second side reveals the mysteries of Guru Meditation numbers. The mat is available direct from Bitstream.

Kuma announced the availability of their K-Spread 2 spreadsheet in the very near future, priced at £79.97.

Enigma Publishing announced the advent of a new Amiga magazine aimed at serious users. The focus of attention will be on features, business reviews and technical support.

Josty UK had all those useful buffer boxes and switching units and Amiga printer cables.



The MCL092, 3 metres printer cable from Josty UK

The I.M.P. is out of the bottle

For all you budding artists get to grips with the image manipulation process of your Amiga.

By Lewis Tilley

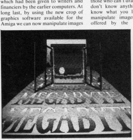
In the beginning there were only the word processors, cost sheets and number crunchers for the servants of Mammon and those who toiled in the city. Then, there came the Amiga!... and the artists of the world were given the same opportunities of expression which had been given to writers and financiers by the earlier computers. At long last, by using the new crop of graphics software available for the Amiga we can now manipulate images at the same levels of excellence that words and figures have achieved.

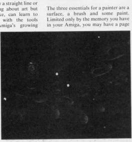
After you have read these ideas on the use of programs like DPaint II, Digi-View and Digi-Paint, your images may still reflect your same knowledge and skills of art, but even those who can't draw a straight line or don't know anything about art but know what you like, can learn to manipulate images with the tools offered by the Amiga's growing painting and drawing software library.

Since Deluxe Paint II has been bought by over 50% of Amiga owners, we shall begin our investigation with this professional paint program.

Deluxe Paint II

The three essentials for a painter are a surface, a brush and some paint. Limited only by the memory you have in your Amiga, you may have a page





from 320 pixels wide by 200 high to 1008 pixels x 1008 pixels. The program normally supplies three page sizes as your surface. The first one is the normal Amiga display size; the second, a full print page which will print out at 8 1/12" by 11" and finally a TV full screen size which displays to the edge of the screen.

The normal standard of 320x200 is easier to use since it is not necessary for scrolling back and forth or up and down with the cursor arrows as you work. However, if you are working for a print-out, choose the 320x340; if for TV display (or for photographs of the screen) use the 352x226 since every little bit helps towards a good display of your picture.

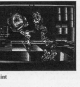
One of the miracles of the program is that it will display, for scrolling, page sizes up to 1008x1008. If you have 512K, load a two colour hi-res into low-res and work on it at that magnification, using the arrow keys to scroll, then reload into hi-res with the format requester.

Brush

The element called brush is a major focus of DPaint (I will now refer to it by this name). In its simplest and most used form it is a one pixel point used in the freehand drawing mode. There are tools, however which change its size, shape and colour. A dotted line which spreads its dots with the speed of mouse movement is especially useful when combined with the GRID mode.

Out of the freehand mode you may select a wide range of shape makers, i.e. rectangle, circle, oval and polygons, both single lined and filled. A line per se may be placed under control as straight, curved, and disciplined. The latter word is my way of identifying a mode that turns your freeform drawing line into a rigid horizontal or vertical one when you hold down the SHIFT key as you draw.

Known as custom brush, the image copying mode "corrals" an area selected as a rectangle or as a freeform shape. It may then be lifted from its place and moved around the screen as you may choose. *This is a powerful tool*, albeit a complex one to learn and use. Since it has the same status as a picture, it too has its own pull-down menu with all the functions of SAVE, LOAD, etc, that PICTURE has. It is the star of the PERSPECTIVE tool which you will find in the EFFECTS menu.



Paint

The artist also requires paint which is supplied under the aptly named element of PALETTE. You have already been introduced to the rudiments of colour changes in the Preferences drawer in Workbench. Here you will meet the old friends that slid from side to side and changed the hues (that is the actual colour like red, yellow and blue in the colour box you had as a child) of the screen and the characters of Workbench.

However, in Palette they slide vertically and change hue, value and saturation (or chroma), if you wish to call saturation that). They also do this in a funny way for an artist familiar with paint on a palette and mixing subtractive colours!

Additive colour mixing is the name of this new game you must learn. Any theatrical stage lighting person can tell you all about it. The footlights have traditionally consisted of a long row of lights which alternated between red, green and blue. Each group of these hues was separately controlled by a sliding dimmer. Dim down the blue footlights and the stage became more yellow. If you dimmed the green, magenta (or baboon ass pink) flooded the actors. Dim red and a weird turquoise blue (called cyan colour) cast its pallow. When you subtract one of the essential colours of the R.G.B. palette, you are left with a colour which is a member of the subtractive artist's paint palette of yellow, magenta and cyan!

Now, let's run this film of the stage lights backwards to see how an additive colour mixing palette works. Start with a blacked out stage. Bring the red dimmer all the way up. You get red light on the stage. Bring the green dimmer all the way up to join the red… you get yellow light on the stage. Now, add to the red and green light the full wattage of the blue – voila! White light. Now that's additive colour.

More than you bargained for?

With the colour palette requester you not only get a wonderful red-green-blue slide controlled mixing panel which displays any changes on a grid of all the colours you have in this particular palette, but you also get a second set of controls which do the same thing but in traditional colour theory of hue, saturation and value.

The addition of controls which let you copy one colour to another place on the palette grid, exchange colours on the grid or spread an array of values and/or hues between two different colours placed apart on the grid should have been enough. The range control is pretty handy because it determines what colours and values go into your gradient fills (a favourite tool that I use constantly). Range is also used in the colour cycling, and I guess that is why it is here. However, since I have a prejudice against all the beer signs of fake animation water falls and forest fires achieved by cycling lights which are hung over back bars in the USofA, I resent the inclusion of these features in the Color Palette Requester. I even resent its inclusion in the DPaint program. What am I saying? Some day I'll see a use made of it that will force me to eat every word I have written against cycling.

More on the screen

It is easy to think of the screen as a blank piece of paper, but is is far more. It may be a piece of paper of any colour you wish. By clicking with the right button on the colour you wish in the palette grid at the right bottom corner of the screen, you set the colour indicator box's current background colour. Click the CLR icon just above this and your screen is changed.

It can also be a rigid grid which forces every alignment to agree with a pre-set horizontal and vertical pattern of squares or rectangles. Click the grid icon with the right button to bring up the gridding adjuster.

You may go further still down this pre-set path of patterning the paper by bringing up the symmetry requester with a right button click on the symmetry icon. Textile designers heaven is here.

How about another piece of paper behind the one you are working on? When you opened the first page file… or loaded in an old picture, you opened a second page anyway. You have to hit key "j" to reveal it. You may swap back and forth between these two pages by using the key "j" command.

One more trick in this page arsenal. Pull down fix background from the effects menu. It protects you by forming an invisible shield over your screen. You can mess it up by fiddling to your hearts content, and then erase all your botching with a click of the left button on CLR icon. You may erase only the bad additions since "fixing" the background by scrubbing the mouse with the right button pressed.

A word on memory

If you are serious about graphics on the Amiga you will need a minimum of 512K. The DPaint manual admits that a megabyte is the absolute maximum that can be used by the program. Only a pinched financial situation should deter you from that megabyte.

The nitty gritty of Key Commands

DPaint may be approached via icons or keys. Even when loaded by CLI with a simple call for DPAINT, the screen presents you with mouse activated icons requesting that you choose a screen format. Later I shall discuss advantages of the different modes of resolution, but for now simply OK the lo-res 320x200 with its 32 colours.

You will be instantly transferred to the action screen which displays a panel on the right of tool icons. You access them with clicks of both left and right buttons of the mouse. The menu bar at the top of the screen is accessed with the mouse's right button in the usual pull down manner. The key f9 toggles off/on the displayed top menu . . . and gives you that little extra space to draw in. The key f10 toggles off/on both the menu and the larger space on the right used by the tool icons so that you may draw in that bigger space!

Now, let's get started, drawing in all this expanded screen that you have added by toggling f10.Key"D" will give you standard freehand drawing with a built-in 1 pixel brush. Want a larger brush? Key "=" increases size (= is also the + key). Key "–" reduces the size at any time. You may increase and decrease the size of a brush even while moving it. Change the brush's colour? Range through the present palette without having to move your brush. Key "[" and key "]" to move back and forward. Observe the brush's change of colour.

Custom Brushes

All of the above key instructions work with the following custom brushes. Just as you chose the single pixel brush with a "D", you may choose to make a rectangle brush of any part of your present screen image. You "cut" a brush by key "b" which presents a large cross hair. Using the left mouse button, enclose the area you wish to make a brush of; release the button and draw! Try the left and right button.

Here are more changes you can make with your custom brushes. Key "h" and you will halve the size of the custom brush. Hit "h" again and again it halves. Key "H" and you double the size of the brush. Key "x" will flip the brush horizontally. Key "y" flips it vertically and key "z" rotates it 90 degrees.

If you change out of this custom brush (let's say to one of the ready made brushes at the top of the tool box which you select from the icons), you can return to the last custom brush you made by hitting key "B".

Tools for the brush

Draw a straight line with key "v". Hold down left button and drag to length and position of the end of the line.

Draw a curved line with key "q". Click and hold left button of mouse to set first end point. Move to second end point and release. Now, move mouse away from points to create the curve. Press left button to draw curve. The French artist Delacroix developed a system of drawing with rounds. You too can draw like Delacroix with this curve feature and the two tools which will now be described.

Make a circle in line of brush with key "c". Set centre point with left button, then pull out to the size you want. Key "C" is a filled circle.

Make an oval in line with key "e" as above. Key "E" makes it a filled oval.

Make a rectangle with key "r". A filled rectangle is made with the capital "R" key.

A special tool which I use often, to give better control to the mouse when cutting intricately shaped brushes is one not accessible from the keyboard. You must return to the icon panel to select the polygon tool. Select the filled icon, then go into Custom Brush tool (or hit key "b").

You must place the cursor at the starting corner and click, then move to the next point and click again. Continue as you outline the complex shape and come back to the starting place to complete the polygon. You may stop at any point and hit the space-bar to let the prgram connect that stopping point to the beginning point.

Fill

The fill tool may be accessed from the key "f". It will fill (with the colour you have selected) any area which is completely enclosed. If there is as much as a missing pixel, the fill will spill . . . out into all the surrounding areas. What do you do then? When it has finished bleeding all over the place, press key "u" for undo. If you haven't been involved in too complex an operation at the time when this happens, the spill will be quickly mopped up, and you can look for the break in the dam. It always happens to me when I'm in the middle of complexities. You just go back to the beginning of where you saved the image last.

YOU DO SAVE THE SCREEN YOU ARE WORKING ON AFTER EVERY MAJOR CHANGE, DON'T YOU? (don't forget to use the FIXING BACKGROUND from the pull-down menu of EFFECTS).

Many elements, tools and modes remain to be discussed in this introduction to the use of DPaint. Most of the things we have not covered in this initial article take more time to explore than the ones we have outlined above. Among them are how to set up Palette for using gradient fills, how and why to vary fill types and further discussion on selection and use of the different resolution screen modes of the Amiga.

Fine tuning with smear, shade and blend must be mastered not to mention the world of stencils, a phrase from the excellent manual supplied with Deluxe Paint II, which lets you block out shapes in a manner which will astound you. So dig out your manual and let it lead you deeper into the mysteries of Amiga paint graphics until we come back next time with ideas of extending DPaint with Digi-View and Digi-Paint.

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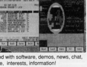

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Amiga Graphics

Stretch the imagination of your Amiga to the full with the help of these new graphics packages.

By Anne Owen

Things have moved on quite a bit since I first started to use the Amiga to produce graphics on screen and on the printer. I started with Deluxe Paint, a copy of which you'll have probably received with your Amiga 500. It is a remarkable program but now, even more remarkable, is Deluxe Paint 2. Can Dpaint 2 be £69.95 better than the original? Well it depends on your requirements. If you use Dpaint for producing two dimensional newsheets, cards or posters then stick with it. If you are a real computer artist then Dpaint 2 has a lot to offer you.

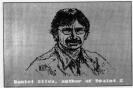
Deluxe paint 2

The first difference you notice is a screen format menu which greets you before entering the drawing screen. This menu is, also accessible from the project menu, and defines your screen resolution and the number of colours available. If you are using a 512K machine then the high resolution screen is available but with a maximum of eight colours. Even so, some features need to be overlayed from disk.

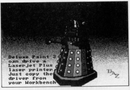
What is immediately obvious is the increased number of menu options. The drawing toolbox however remains the same. The options menu branches into a page size menu where you can set standard (screen size), full (printer A4) and video (whole screen without the borders). The print option has been improved greatly with direct access to settings such as black and white, grey share or colour, portrait or landscape, full control over the aspect ratio of the dump and the number of copies. Thankfully you can also now terminate the dump at any stage.

From the many new drawing features I must pick out gradient fill – an aera fill with a predefined gradient of colour, top to bottom or vice versa; pattern fill – where a brush pattern takes the place of a solid colour; blend, smear and smooth options for brush drawing; shear and bend on brushes; perspective drawing – you can set the perspective centre and, using the keypad, rotate around any of the three axes and fix or free an axis. The mouse moves and sizes the brush before drawing. An anti-alias feature smooths the jagged edges that can occur with perspective drawing. This is the slowest of Dpaint's drawing functions but the results are worth the wait.

Two other major new features are stencils and fixed backgrounds. When you get to a certain stage in a drawing you can fix the background. Any experiments can then be wiped to the old picture instantly with the CLR icon. Stencils mask certain colours on the screen so that your airbrush tool will not effect them. This makes precise shading and filling trivial, as oppose to the time where you might have had to use the zoom feature to tidy up an edge.



Deluxe Paint 2



Deluxe Paint 2
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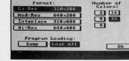
driver from
your Workbench



Resolutions available with Deluxe Paint 2

Last but not least is the Deluxe Paint 2 manual, which is a vast improvement on the old, with both reference and tutorial sections. The disk comes with example brushes and stencils to use in the tutorials. I am impressed by the way that so much more has been incorporated into Deluxe Paint 2 without sacrificing its best features, ease of use and fast operation. With numerous screens of clip art just waiting for your personal touch, Deluxe Paint 2 is an irresistable piece of software.

Butcher

In an earlier review I found Butcher a very useful program; much more than just a utility mainly because of its ability to swap between screen formats (now achievable in Dpaint 2) and for its selective print feature, clipping and printing any part of the screen. A new version has improved the drawing facilities and makes Butcher a useful art package in its own right, though it does lack features like fonts and brushes.

The palette and special effects are very comprehensive with features such as edge enhancing and colour filters. The Mosaic option now allows you to tile the tiles which are used in the redefinition of the picture on screen. A 'spare' screen is kept in memory and can be merged or swapped with the current screen.

Anyone interested in the printing industry will enjoy investigating colour separation and screening – a way of producing half tones for black and white printing. Pixels on screen are analagous to the dots which make up all the printed material in our newspapers and magazines and Butcher investigates how they can be manipulated.

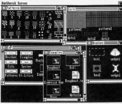
Experimenting with a dot matrix or laser printer can bring interesting results. If you use Pagesetter for desk top publishing then try processing your graphics through Butcher first. The packages complement each other and I'm happy to recommend the second version of Butcher as wholeheartedly as I did the first.

Express Paint

An interesting newcomer to the Amiga graphics scene is Express Paint, which is instantly recognisable on the shelves by its huge plastic box. The package contains mostly air but also a 3.5" disk and a neatly typeset manual. Express Paint boasts some very interesting features, not least the ability to create a picture larger than screen size.

I found using the software a little less than 'intuitive' which was disappointing because there is no doubting the power of some of the features. The text fill immediately caught my interest, especially as it works just as well with irregular shapes as with nice straight columns. Amiga fonts are supported with underline, bold and italic, centred, right left and fully justified.

As well as screen size, the number of colours in use can be defined at the start of a session. When it comes to drawing I liked the spraycan slider control, varying the density and spread of the 'droplets'. Rectangles, circles, arcs, ellipses and freehand drawing in different line styles are all available and there's a pen tool which can be sized to suit. Space can be filled with solid colour, text or cut pattern. Cuts, patterns and brushes can be held in libraries ready for use, and cuts can be taken from any part of the screen. Special effects can then be performed upon them, flipping, rotating, masking colours and so on.



The Express Paint disk

The print options are comprehensive and need to be because of the nature of Express Paint's larger than usual screens. The horizontal/vertical ratio can be adjusted and multipage printouts acheived for posters and banners. The width of the printer is the main problem!

I wasn't able to make full use of the larger screen and I didn't like the finish on the low resolution display. I did however enjoy using the 'lock' option which enables the preservation of 'windows' during drawing and picture merging operations. The desktop publishing element does not compete with a specialist product like Pagesetter. Nevertheless, use of grids, boxes, purpose drawn cuts, line styles and text fills can manufacture a convincing and interesting page of text.

Although I found its working awkward compared with, say, Deluxe Paint 2, there's no doubt that Express Paint has a number of powerful features.

Touchline:

Name: *Butcher and Express Paint.* ***Price:*** *£28.00 and* ***Machine:*** *Amiga.* ***Supplier:*** *Amiga Centre Scotland, 4 Hart Street Lane, Edinburgh EH1 2RN.* ***Tel:*** *031-557 4242.*

name: *Deluxe Paint 2.* ***Price:*** *£69.95.* ***Machine:*** *Amiga.* ***Supplier:*** *Electronic Arts, langley Business Centre, 11-49 Station Road, Langley, Nr. Slough, Berks SL3 8YN.* ***Tel:*** *0753 4944.*

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Play it again Sam

If Basic is your native language then the Amiga offers alternatives to the bundled Microsoft version.

By Anne Owen

If you are developing software for the Amiga then SAM Basic is one alternative you might consider, especially if you require multi-tasking support.

SAM Basic programs can be created in any text editor, including ED or EDIT or a wordprocessor which produces ASCII. An editor called TXED is suplied with the package. The ASCII output from an editor is tokenised and the code optimised before use.

There are two versions of SAM Basic; the development version and a run time version. The run time version can be distributed so that your own programs can be used by others, the development version cannot. When a program is saved ready for distribution it can be protected. An icon is also saved to represent the program and the program can be run by clicking on its icon.

Development is aided by HELP which opens a window with keyword syntax and useage, WHY which generates a second level of error message, FORCE ERROR, ERL, ERN, ERS (error lines, number and segment) and RENUMBER. KEY defines a function key string. LIST lists on screen, LLIST to the printer.

SAM Basic uses line numbers for its statements and all the usual control structures are available such as REPEAT...UNTIL, WHILE, CASE, BLOCK...END BLOCK. You can call a procedure, DEFINE LABEL and then GOTO or GOSUB to that label, from whence your program might RETURN a value.

Sam Basic allows extensions to itself to be loaded. This is important because the language is large, and if a certain extension is not required, it can be discarded with KILL. There's a function which can be used from within a program to selftest whether any particular extension is present. If not, it can be added on from disk. It looks like this:

```
IF NOT (EXTENSION("graphics"))-
THEN EXTEND WITH "sambasic:
extensions/graphics
```

SHOW EXTENSIONS is available while developing.

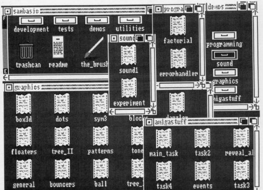
Key Words

SAM Basic contains a hard core of the usual functions and keywords with many more available as extensions.

If you are designing a package with a user interface then you'll be pleased to know that windows can be opened and sized. Up to thirty-two pull down menus can be defined, each containing numbered items which can be chosen with the mouse. Keywords such as MOUSEBUTTON and PRESS are employed to interpret mouse movements. Menu items can be added at a later date.

I was impressed by the way SAM Basic handles filing activities. The keywords are sensibly similar to AmigaDOS commands in some instances, e.g. DIR, DELETE FILE and MAKE DIRECTORY, CHANGE DIRECTORY is very useful. OPEN, PRINT, OUTPUT and CLOSE (ALL) FILE(S) are used for reading and writing data. READFILE reads a file's status. OUTPUT IS redirects data to a file or device, e.g. a printer.

SAM Basic controls graphics via special keywords and shape tables of simple and virtual sprites, bobs and three dimensional drawings. IFF files (including Hold and Modify) are handled by LOADSCREEN and WRITE IFF (save to a file). FETCH loads a file into a memory buffer (which can be CLEARed) for it to be TRANSFERed to the screen. Screens can be moved forward and back and both windows and screens can be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errorhandler
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sound
graphics
amigastuff
graphics
box3d
dots
sym3
block
floaters
tree_II
patterns
tone
general
bouncers
ball
tree_
amigastuff
main_task
task2
reveal_al
task4
events
task3

dumped to a printer. Font style, width and spacing can be defined.

SAM Specials

SAM Basic has a feature known as segments. These are separate SAM Basic programs (up to 32) defined by the main program. Any segment can be activated with the command USE < segment name >. SAM Basic then goes on interpreting from line 1 of the segment. Each segment has to be treated as a separate program, but values can be passed between segments via SEND MESSAGE, MSGTYPE, etc.

A potentially very powerful feature of SAM Basic is its ability to activate and manage a number of tasks at the same time. Multi-tasking is usually the domain of AmigaDOS but SAM Basic provides commands like TASKING ON/OFF, DEFINE TASK, TO TASK, HOLD and SLEEP. The commands define the tasks to be performed and tidy up after completion, or perhaps temporarily suspend a taks only to return to it later. It is left to the programmer to keep track of which tasks are 'operational' although there are commands like TASK STATUS to help.

The other features which I found useful while programming in SAM Basic were FRE – which gives memory status information, i.e. how little you have! UCASE$ and LCASE$ convert to upper/lower case in strings and TRIM$ trims spaces. CSRLINE and POS read the current cursor position.

The only category which I found SAM Basic weak was sound and speech, e.g. there is no equivalent of Microsoft's TRANSLATE$ which 'speaks' from a string of phonetic symbols.

SAM Package

Kickstart 1.2 and 512K or more are necessary if you wish to use the current 3.1 version of SAM Basic. The interpreter and tokenising editor are the core of the package with standard extensions for graphics. IFF file handling, 3D graphics and Shape handling. The disk also contains examples for all the main areas of use. These, and the excellently written and produced manual – an A4 folder – mean that SAM Basic can be learned quickly. Planned extensions include complex file handling, array, string and sort package, toolkit and additional graphics. The nature of SAM Basic means that any number of new extensions could be provided. The practical nature of the facilities provided by SAM Basic make it a powerful development tool for those who prefer Basic.

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Maxiplan

Already an established spreadsheet for the Amiga with database and graphics features, the Maxiplan has now become a macro language.

By Anne Owen

Maxiplan has in fact evolved into two separate programs, Maxiplan 500 for 512K machines at £149 and Maxiplan plus, with a macro programming language, at £199. If you own as 512K machine then don't try the latter. It runs but large sheets are not possible and other features are restricted.

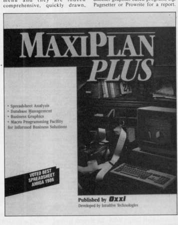
Once you've set up the dimensions for your worksheet, the mouse can be used to move anywhere within it. An overview of the sheet helps you to plan your layout and zoom takes you down to the level of data and formulae in individual cells. The sheet display and the layout of individual cells can be adjusted in almost every respect, e.g. width, currency sign, alignment in cell, data format, grid display, method of formula display and so on.

Creating a sheet is made easy by move and copy, multiple row and column insert and delete. The clipboard, which is used for copying, can handle up to 100 rows. Operators and functions are easily entered by clicking on the relevant words displayed in pop-up windows. Parts of the sheet can be protected and the complete sheet secured with a password if necessary.

Data can be extracted from worksheets saved to disk by using the REFER function which takes a full file/sheet cell specification. Data can be highlighted and operated on with the database functions of find, extract and sort. These operate according to criteria spelled out on the sheet.

Printer control, down to fine detail, is available from pulldown menus. When opening, saving or deleting a sheet, you can click on drawers or files displayed in a window or type in the file specification. Macrosheets, datasheets and worksheets can be sensibly kept in separate drawers.

The charts now have their own menu and they are indeed comprehensive, quickly drawn, colourful and accurately labelled. Available are line, pie, bar, 3D bar, area, X/Y, stack bar, step and hi-lo charts. They can be sent to the printer or to an IFF file for transfer into another graphics based program, e.g. Pagesetter or Prowrite for a report.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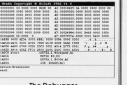

```
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D0:00000001 00 0000 0000 0628 00   A0:0001B429:0A 0000 0000 0000 00
D1:00000000 0000 0000 0000 0000    A1:00000000:0000 0000 0000 0000
D2:00000000 0000 0000 0000 0000    A2:00000000:0000 0000 0000 0000
D3:00000000 0000 0000 0000 0000    A3:00000000:0000 0000 0000 0000
D4:00000000 0000 0000 0000 0000    A4:00000000:0000 0000 0000 0000
D5:00000000 0000 0000 0000 0000    A5:00000000:0000 0000 0000 0000
D6:00000000 0000 0000 0000 0000    A6:00000000:0000 0000 0000 0000
D7:00000000 0000 0000 0000 0000    A7:00024984:0001 B468 0000 1950
PC:0001A8C8 SR:0000  U             A7'0007FFFA:0000 0001 B43C 0000
0001A8B8 0000 AE34 0000 6881 0000 0094 0000 0010   ...4..k.........
0001A8C8>227C 0001 A918 7000 2C78 0004 4EAE FDD8   "|....p.,x..N...
0001A8D8 4A80 6700 0036 23C0 0001 A914 2C79 0001   J.g..6#.....,y..
0001A8E8 A914 4EAE FFC4 2800 2204 243C 0001 A924   ..N...(.".$<...$
0001A8C8 start                  >MOVEA.L #dosname,A1
0001A8CE                         MOVEQ #0,D0
0001A8D0                         MOVEA.L $0004,A6
0001A8D4                         JSR -$0228(A6)
Exception:Breakpoint
Command:
```

The Debugger

MonAmiga is the symbolic, front-panel debugger with built-in disassembler. All the usual features like multiple breakpoints, single-step etc. are supported plus sophisticated search capability, multi-tasking and a backup screen so that you can see your program's output independently of MonAm's display.

Devpac for the Amiga comes with a full, ring-bound manual with tutorial and the Motorola 68000 Programming Pocket Guide.

HiSoft The Old School, Greenfield, Bedford, MK45 5DE. (0525) 718181

Charts are updated automatically from the worksheet and vice versa. Lables can be used over a number of cells. The availability of different pen colours and text styles makes a sheet more understandable, although the colour codes did send spurious characters to the office laser printer despite the correct preferences setting. Parts of the sheet can be frozen for permanent display while the rest scrolls normally. Cells can have extended notes attached to them, which can be displayed or spoken, or both.

Plus Factor

Maxiplan contains a wide variety of functions ranging from AVERAGE and COUNT (statistical) to Net Present Value, and Expression for Principal (financial for the accountants among you). There are logical, date and mathematical functions and statistical functions for the database, e.g. DSUM and DAVERAGE. The trigonometric functions include (A)COS, (A)TAN, (A)SIN and PI. There are also some useful looking functions such as CHOOSE, which selects from a list, and LOOKUP, which find a value in a cell.

Macros can be created on a Macrosheet in two ways, either typed in as functions or recorded automatically. Up to 64 macros can be defined per sheet. Any option normally available from the menus – and more – can be achieved from a macro, locating cell, opening a file, or displaying a chart. There are number of control structures which can be employed within a macro to access subroutines, branch or jump.

Any repetitive or frequently run analysis or calculation which you perform on a sheet can be recorded or programmed. To record, all you have to do is set the recorder going and carry out the action you would normally perform manually on each occasion. The recording can then be 'played back' or displayed and edited in the form of a Macrosheet.

The Maxiplan Plus manual is excellent, good on tutorial and there are lots of examples on the data disk. There is online help for each menu and 'how to' text.

On the downside the use of a disk buffer slowed down some operations like cut and paste (although extra memory is a cure for this). There was a minimum of five mouse clicks requirement for each worksheet that I wanted to open from the data disk in drive 1.

In general I found Maxiplan Plus responsive and data entry very easy because of the excellent user interface. Key press equivalents are available for many of the menu options.

The graphs are very impressive, the database features useful and the macro language comprehensive, which makes Maxiplan Plus an all-rounder for costing, planning and document production of all kinds. The overall impression is of a professionally produced and supported product.

Touchline:
Name: *Maxiplan.* ***Price:*** *£120.* ***Machine:*** *Amiga.* ***Supplier:*** *MPC Software (UK).* ***Producer:*** *Oxxi Inc. PO Box 4000, Fullerton, CA 92634.* ***Tel:*** *714 999 6710.*

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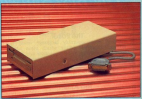

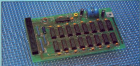

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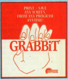

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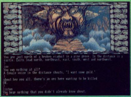
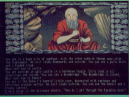


```
You are just north of a broken viaduct in a pine grove. In the distance is a
castle. Exits lead north, northeast, east, south, west and northwest.
>
inv
You own nothing at all!
A female voice in the distance shouts, "I want some gold."
>
shout hey you all, there's an orc here wanting to be killed
OK.
>
listen
You hear nothing that you didn't already know about.
```

Knight Orc



```
You are in a huge pile of garbage, with the other rubbish thrown away after
the tournament. An exit leads downwards and outside. You can see a putty knife
and a hooded cloak.
What now? run to castle
You are outside an ugly castle in a hornbeam tangle. Exits lead in all
directions and inside. You can see a drawbridge. The drawbridge is closed.
What now? run to hermit
You are in the hermit's horrid little cave, decorated with cartoons and
Christmas cracker mottos. An exit leads outside. You can see the hermit and a
trophy cabinet.
A male voice in the distance shouts, "How do I get through the Paradise Gate?"
```

Knight Orc

I think it was PCW or some such magazine that graced us with the statistic that every ten hours, a commercially available adventure game is released for a computer somewhere in the world.

The sad fact of the matter is that few of them can ever be similar to Knight Orc, as most adventure games are just a quick way of making money out of an adventure generating system – rarely do they actually make use of a computer's capabilities, and a "standard" text only adventure running on an Amiga would be a terrible waste.

I think Level Nine had this in mind when they produced Knight Orc, an adventure supporting full graphics as well as allowing additional input from the mouse – it is also rare to find an adventure game (in the traditional sense) where you play one of the bad guys. In this case, it is a loathsome Orc called Grindleguts.

Out of the three adventures that make up Knight Orc, the first one – Loosed Orc is the most infuriating in that you have to get to grips with the adventuring system in order to actually play the game properly. For this reason the first adventure is the easiest, but after the first level, there's no respite from the battering the brain gets. Having to solve puzzles, getting out of mazes, avoiding a slightly gay dragon (in the archaic sense of the word!), and generally keeping out of the way takes up a lot of mental energy, not to mention cherry cokes.

The adventuring system is massive, you can speak to any character in the "world", and you can even tell them to do things – providing they are willing to do it. After all, picking up a bunch of keys from within an empty well is not too much to ask of anybody, but to stand in the way of a charging knight with a bloody great sword is another matter entirely.

The accompanying computer graphics are very good; they have a pastel, almost dreamlike quality that makes them all the more unusual. The locations are very well drawn, but the characters leave a lot to be desired. Perhaps a few more lifelike images next time – please? Still, the many locations are nearly always supplied with a picture, but should you want to play the game like a traditional adventure, you can always slide the pictures off the screen with the mouse.

Having spent many hours playing this game I must admit that I didn't actually finish it; I'm not sure that I want to finish wandering about this strange new world inside my Amiga. Of all the Amiga adventures I have played this is the best – try it and see.

C.G.

Touchline:

Name: *Knight Orc.* ***Supplier:*** *Firebird Software, First Floor, 64-67 New Oxford Street, London WC1A 1PS.* ***Tel:*** *01-379 6755.* ***Machine:*** *Amiga.*
Price: *£19.95.*
Originality: *7/10.* ***Playability:*** *7/10.*
Graphics: *7/10.* ***Value:*** *7/10.*

Impact

Here we have a blast from the past. Do you remember the original game of Breakout, where you guide a small dot around the screen by bouncing it off your movable bat and similarly off a pile of bricks piled up in front of you.

Since the original game was released nearly a decade ago, Breakout naturally faded away into history as being probably the first computer game to make it into the living room, along with ping pong and asteroids.

Following suit after the recent success of Arkanoid, Impact is a version of the game for the Amiga, but this time, it has been more than revamped and souped-up with a few colours. This time, the game has been given the full treatment which comprises full Amiga graphics, multi-coloured bricks, some great sound effects and mouse control which is surprisingly, a very efficient way of controlling the bat.

But the extras don't just end there. Every now and then a spinning spanner drops down from one of the bricks. This can be picked up for extra points, or as part of an "accumulator" whereby you can save your bonus points for tools and goodies which makes clearing the screens an easier task.

There are nine bonuses in all, but there are more spanners, so it is possible to have more than one active at any given time. For instance, you can have a double width bat and a magnet "on" at the same time, but you can only really have one item when going for higher goodies such as a missile base (!), a smart bomb and even an invincible ball!

The sound? Well, there isn't a great deal of scope for music in a game like this, but there are some wonderful sound effects such as "Genie" chimes.

The screens are all well thought out, but should you find the challenge beginning to wane, you could always try your hand at designing a few of your own. This is made possible by including a screen designer so you can design your own silly screens. This makes the game more maddening – after all, no one likes to be eaten by their own screen do they?

Impact is a good name. It is very playable and is instantly addictive; the sound effects, while not being stunning are still imaginative, and the extras really make the game an enjoyable way of passing the odd evening or three. If you are old enough to have enjoyed Breakout, then this is the game for you.

C.G.

Touchline:
Name: *Impact.* ***Supplier:*** *ASL. Winchester House, Canning Road, Wealdstone, Harrow, HA3 7SJ.* ***Tel:*** *01-861 1166.* ***Machine:*** *Amiga.* ***Price:*** *£14.95.*
Originality: *3/10.* ***Playability:*** *9/10.*
Graphics: *4/10.* ***Value:*** *10/10.*

Diablo

Diablo is a member of the "budget" range of software titles from Diamondsoft, an English company who look set to begin churning out games for the Amiga.

Diablo is neither a strategy nor an arcade game; there aren't any aliens to kill, there aren't any sampled sound effects (that I can notice) and the programming shockingly under-utilises the Amiga's processing capabilities. The best description of the music is "totally aimless". It wanders about a very limited range on the Amiga and is so annoying I have to reach for the Amiga sound control (even though there is a sound off control).

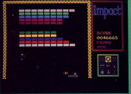
The game involves clearing a pathway for a ball which is running along a track. However, the track is partially incomplete and the object of the game is to make sure that the ball doesn't fall into the "hole" where the incomplete track is.

Playing the game was more of an annoyance than anything. The screens, when completed, were more or less the same, and the overall "feel" of the game was very tacky. Surely, if you are going to produce a game for the Amiga, even if it is a budget one, you are going to make sure you try to use at least a few of the facilities the machine has to offer. How about three or four channels of sound, or even a few more colours, shadowing effects, in general, how about writing a game worth playing?

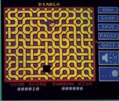
Although Diablo may be mistaken as one of those games for the thinkers among you, I'm afraid that this disk is consigned to the "format and use elsewhere" pile. Diablo isn't addictive in any way – it simply insults the mind.

C.G.

Touchline:
Name: *Diablo.* ***Supplier:*** *Diamondsoft, Unit 4, Isleworth Business Complex, St Johns Road, Isleworth Middlesex, TW7 6NL.* ***Tel:*** *01-847 4457.* ***Machine:*** *Amiga.* ***Price:*** *£19.95.*
Originality: *4/10.* ***Playability:*** *3/10.*
Graphics: *2/10.* ***Value:*** *3/10.*



Impact



Diablo

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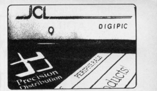

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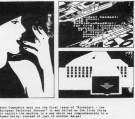

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Midi, Music and ME!

At last! The Amiga becomes a fully fledged compositional tool

By Clive Grace

Computers and music have always been a rather strange combination – but nevertheless, some good things have come out of the marriage between high technology and musical instruments; certainly at the very top end of the spectrum we have the CMI Fairlight and the Syco Fairlight II, and probably the most established computer music system – the Synclavier, has been with us for some seven years.

The problem with linking a computer to musical instruments is one of communication. This is why in the early eighties, a group of musicians, instrument makers and computer scientists grouped together to create a communications protocol enabling computers and musical instruments to be linked to each other, sending information to and fro in much the same way that some networks operate, via wire links in a chain.

The communications standard was called MIDI and stood for the Musical Instrument Digital Interface. This was partly responsible for the dramatic increase in sales of synthesizers after 1983 when the standard really started to catch on, when musicians saw just how useful MIDI was.

Computers have always been considered a good medium with which to store music; there have been many packages released for the smaller 8 bit computers to achieve this, but none of the ones I have seen managed to achieve the simplicity with which we associate the sheer power of the Synclavier or the Fairlight.

Composition – the next big thing?

Music composition languages are very useful if you are programming music with a rigid compositional structure. Many songwriters studios have at least one MCL for assisting the composition process because songs are very formulaic. Many of the songs in the Top 40 are based around the standard "verse chorus, verse, chorus" formula. Indeed, some "early" examples of music from around the 18th century can be similarly classified, but without the rigidity of popular music (for example, the fact that most songs are in the key of C, and very often they conform to a 4/4 variant such as 2/4 or 4/8).

The computer has made the composing process so much easier. It has rationalized the whole song writing process in much the same way that the word processor has revolutionized the way words are put into a word processor – indeed, the music composition packages (MCP's) and music composition languages (MCL's) reviewed here can be seen as the first major packages for the 16 bit computer to rival the sheer processing power of the Fairlight and the Synclavier.

Amiga Advantages

The advantages of using an Amiga for music composition rather then lugging the obese processing weight of the Fairlight are obvious – the lower price and the increased performance level.

Many users do not need all of the facilities that the Fairlight has to offer, and while the software on both the CMI and the Syco machines has taken an awful long time to produce, it can become quickly outdated by other programmers writing for other machines with these facilities built in as standard. For instance, the Fairlight requires quite a lot of memory to store samples and the like, but with the Amiga, these can be stored as a condensed file and retrieved as and when they are needed (for example, the IFF file format which enables a very high file interchangability between both applications and packages).

Everyone has to accept when buying a computer system that no matter how advanced their machine is at the time, there will be a time when their machine will become outdated and outperformed. This is the case with many of the so-called "professional" composing systems currently in use in many top flight recording studios. And nowadays it is common to see an Apple in the corner of the studio or as part of the mixing desk – we are now seeing the Atari ST and musical software being given full quotes on LP sleeves as musical "instruments" (for example Tangerine Dream's "Tyger" has full quotes to Atari software packages and the Atari logo!).

In the past, composers have had to either fork out lots of money for professional musicians to play their music for them, or have had to learn how to play the instruments themselves. While this leads to a great deal more natural playing, this can lead to stilted and uncomfortable playing techniques.

Of course some people get it right first time, for example Mike Oldfield, who recorded a great deal of "Tubular Bells" in "dead" studio time by himself, but after the album was released and made him a great success (and a considerable amount of money) he decided to use more musicians on the follow up album, and who can blame him?

There are hundreds of composers and writers these days still beavering away at home or in their bedrooms who still haven't mastered their instruments – and it is for these people that computer music has so much to offer.

Modern Day Recording Techniques

The whole ethos behind using computer music software packages is to make the whole composing and recording process so much easier.

For instance, the home musician can record a piece of music on their home computer using it like a cross between a digital tape recorder and a word processor using the crummy sounds on their home systems. They can then hire out some very expensive syntheziers and drum machines, or just use the ones available in the studio, and then record with them. Of course with the Amiga, you can sample the sounds of the particular instruments you are using for later use, or for the studio.

At present, no one has copywrighted their sounds, but soon this will become an act of piracy – just like ripping off other people's software (which I hasten to add is killing the software industry). You will soon have to get permission to do so first.

Composing

The best way of approaching the problems of composing with a computer is to consider the whole process as a bit like writing a letter with a word processor – nothing exists until you either save a file, or choose to print it out.

Of the many music packages currently available for the Amiga, there are some extremely good ones available. Aegis Development has an excellent package called "Aegis Sonix", whilst Electronic Arts has "Deluxe Music Construction Set", both work on the Amiga 500 as well as the Amiga 1000.

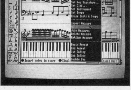
Of the two, the most famous is the Aegis Sonix package; this originally started life as a package called "Musicraft", and while this was a very good package in its own right, there were still some vital features missing that Aegis saw fit to include on Sonix when they bought the rights of the software and tracked down the author for a rewrite.

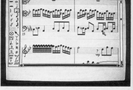
Aegis Development has taken an interesting approach to music software, turning the Amiga into more of a synthesizer than a music composition package. The sound generation capabilities are very good to say the least, supplying a number of tools with which to edit and modify the existing sounds stored on the disk – of course you can use sampled sounds from packages like "Perfect Sound" with Aegis Sonix.

As part of the software, Aegis Sonix has a waveform editor, enabling the user to create custom waveforms and envelopes in much the same way as one would on a conventional "analogue" synthesizer.

The "main area" of the program is the staff editor. This is essentially one line of manuscript with a Bass and a Treble clef at the top of the screen. As music is entered onto the staff, the bars scroll sideways and are individually numbered, unlike some packages that number the bars after every ten or so.

The time signature and the key signature follow suit as with standard





music notation. Signatures can be from 1/2 to 9/8 and can range from C flat to C sharp.

Just below this is the scroll bar. As you edit music, it is often necessary to move about the score that you are working on, and the scroll bar makes this a very easy task. If, for instance, you want to jump to the middle of the section, you must place the bar to the middle of the scroll bar – it is as easy as pushing the mouse!

At the bottom of the screen are the general "controls" such as Volume, Tempo, Transpose and Tune. Transpose is useful, should you want to quickly hear the results of a key transposition, it is useful for working out which harmony or chord to use in a song you are building up from just a melody.

The three icons for Play, Stop and Repeat are used to control the music playing. The four buttons represent half of the available instruments. The two buttons directly below the Bass clef (or whatever you have chosen), flip between sounds one to four inclusive, and five to eight. These last four are only accessible via a MIDI Interface and a MIDI patch, more of which later.

Keying in music is as simple as point to the symbol held on the middle line, clicking the icon, and moving the selected shape onto the right line!

Notes that are too long for the bar in a particular time signature are tied over to the next bar with the correct symbol. Amazingly, there is no slur symbol, neither is there any way of slurring two notes together except by tieing two notes over a bar! This is a serious omission, especially with certain pieces of music, as all sense of dynamics can be lost.

Some of the more esoteric modern notation symbols are not supported, but I would estimate that a good seventy per cent of modern notation symbols are supported within the software, certainly there is enough to transcribe most pieces of music across from paper to computer.

Like the Word Processor, getting the notes into memory is only half of what can be done. Whole sections of music can be copied and transferred from bar to bar as well as from stave to stave. This makes pieces of music like Pachelbel's Canon a piece of cake to key in.

The Amiga as a Synthesizer

Aegis Sonix can also behave as if it were a hybrid Analogue/Digital synthesizer. You are given full control over the waveform by including a sound editor; apart from supplying a LFO (low frequency ocillator) and with a filter with a LFO fade out option there is a harmonic adjustor enabling very powerful editing functions to be made to the general sound.

Basic waveforms include the usual square, sine, triangle and ramp (up and down) waves. These are saved with your music file, but they can be stripped off and used with other music files and with different packages as well.

There is a four-step ADSR envelope generator, not particularly generous I admit, but no worse than many professional synthesizers of the analogue/digital hybrid era (Prophet 5 and Jupiter 8 to name but a few classic machines from this era).

Aegis Sonix can accept MIDI information as an incoming signal. Sonix can also send data to external synthesizers with the interface, as well as MIDI controlled (or moderated) instruments including my good old faithful drum machine, the Sequential Circuits "Drumtracks".

There are no problems with other interfaces as there is a Commodore Amiga MIDI interface standard. That said, the Mimetics MIDI interface is a standard implementation and works beautifully.

Having had the good fortune of trying Aegis Sonix out on the Yamaha DX-7 – the archetypal MIDI keyboard – I was pleased to note that it not only accepts channel information, (more than one instrument at a time) but patch changes as well. Octave changes, velocity sensitivity (only on post 1984 MIDI keboards) volume, vibrato and even the pitch bend option are all supported amounting to quite a complete MIDI specification as far as the DX-7 is concerned.

Aegis Sonix is a remarkably straightforward package; the demonstration programs are very good, albeit a little too "poppy". The sounds supplied with these programs are good, although I would have been a little more impressed if they were more realistic, especially the Piano and the Saxophone which are awful.

Aegis Sonix has an excellent data entry system, especially if you are not particularly *au fait* with the music symbols used in twentieth century musical notation forms. Aegis Sonix is, by contrast, very straightforward because all you have to do is point at the icon, select it by pressing the left hand mouse button, move to the position on the line, and click left hand button to lay it down.

There are plenty of features which enable cutting and pasting, probably Aegis Sonix's strongest point.

Files are saved in the SMUS format, making them easy to import to other packages such as Deluxe Music Construction Set and Instant Music. Both packages are by Electronic Arts.

Concluding Aegis Sonix

In all, this package is an excellent introduction to writing music with the Amiga. Music notation ends up as more or less real music notation – with a few extra bits specifying instrument names and so on...

This is a good package, perhaps one of the best overall music packages I have seen in a long time. It is MIDI compatible and can send eight channels of MIDI information at a time – not the full sixteen channels I grant you, but eight channels of MIDI information are more than enough for many peoples applications.

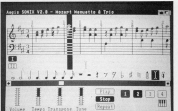
Deluxe Music Construction Set

On a slightly different level is the Deluxe Music Construction Set from Electronic Arts. This package boasts a full standard music notation set. It can display more than one line of stave notation on the screen at any one time. It can display a limited staff depth (i.e. no Bass clef), for instruments that do not go down low enough (like the violin), it has a full MIDI driving capability and some pretty amazing general music editing facilities.

The truth of the matter is that the Deluxe Music Construction Set is probably the most professional stave orientated composition system I have seen on any machine. In my experience, it is second only to the Synclavier's rather expensive system which can accept input from a vast majority of inputs.

Deluxe Music Construction Set has a few nice facilities when it comes to connecting the Amiga to MIDI instruments. There are no software patches to be use, no "special" notation forms to be added to the beginning of the music. Deluxe Music Construction Set is as happy to send MIDI information as it is with its own sounds.

Unlike Aegis Sonix, there is no synthesizer-like wave editor in this



package. The built in samples do not sound all that brilliant, but again, any standard sample file such as those from Perfect Sound can easily be transferred across the Deluxe Music Construction Set format by using the IFF converter.

The Deluxe Music Construction Set has two music file formats. Firstly the SMUS format, which is basically the same as that of Aegis Sonix, in that there are no slurs supported, there are limited tie facilities, and basically it is a simple note on/off notation. There are no fancy signature changes during a piece of music which is a shame, but this does mean that files are transportable from one piece of software to another.

For the options not supported by SMUS, you have to use the "DMCS" format, which is exclusive to the Deluxe Music Construction Set package. DMCS format has automatic note beaming, slurring, steam reversal and a novel, but thorough use of specific key signatures (not having to key in a sharp to obtain a natural!). There is better control of the dynamic range of an instrument even accepting "dolce" in the screen, and there is even a play "style" option, which is fun to play with, to say the least!

The Grand Staff editor really is rather nice, but it can be a bit tedious to use. If you miss a key, you have to go through the process of going to the eraser icon, and rub out the offending note before moving onto the next one in the sequence.

The page layout can be altered. This does not affect the overall size of each individual crotchet or quaver, but it attempts to cram the notes together so that the notes are very hard to read at times. There is no attempt to resize the notes on the stave. Usually I select the "page" to be around eight or nine bar widths. I then use the staff editor as a spreadsheet type entry system whereby the screen acts as a window on the music.

Copying notes is a little clumsy, certainly clumsier than Aegis Sonix' bar by bar method. On the whole, the system is reasonably friendly and is quite easily mastered, even note for note entering is a little time consuming.

Changing notes over to their slurred equivalents is easy; (a bug bear of mine with the Fairlight). With Deluxe Music Construction Set, all you do is select the "pointer" icon and "box" in the notes to be slurred. This should be done from the outside going in if there are more than two notes to be slurred together, and it works very well – certainly better than anything the Fairlight can offer.

"Boxing in" notes is the most important editing feature there is. It forms the heart of most of the group move and copy operations, and it is even used to join notes together as is found in standard notation forms. Thankfully the Deluxe Music Construction Set does not leave individual notes in a sort of computer-moderated version of notated music.

Printing is very nice with this package! Most of the popular printers are supported, even a laser printer, which should give some very nice results if used carefully.

Composing with Deluxe Music Construction Set is easier than with the Aegis Sonix because the writer can see more of the surrounding music at the same time. It is possible to see six bars of four stave lines, all properly notated and all nicely lined up.

Concluding Deluxe Music Construction Set

This is a wonderful package, written for the musician with an Amiga, I found it particularly responsive with the DX-7 as well as other synthesizers such as the Juno 60 etc. I was surprised to see that it was quite happily accepting most of the information from keyboards with retrofitted MIDI interfaces, especially those with older interfaces tacked on, such as the Prophet Pro-One – probably the best synthesizer there is for bass lines!

Deluxe Music is very good with "real" music. I have input short pieces of music by Mozart and Bach as well as a few interesting ones by Bartok, and all came out looking like they came in, which is a good sign for a music package boasting MIDI compatibility.

I have tried this one in a small studio and I was amazed at the speed with which I was able to transfer other peoples music into the computer – unfortunately many young bands these days cannot read music which is a shame as the power of this package is completely lost on them.

By reading this review you will realise that I have been comparing this software with parts of the CMI and Syco Fairlights and the Synclavier – instruments I have had the good fortune to use. With the processing power and memory of the Amiga, these machines will soon be toppled by great pieces of software such as Deluxe Music Construction Set – they may look pretty, but that doesn't mean to say that they are any the less powerful!

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OBLITERATOR

OBLITERATOR

You are Drak the Last of the Obliterators, a genetically enhanced and awesome fighting machine, bio-engineered for the execution of incredible tasks, the ultimate solution to the most cataclysmic of predicaments.

In the voids of Federation space an alien cruiser has materialised. It is a ship of sinister and foreboding power. Federation defences have been smashed, Earth lies exposed, there is only one hope and you are it!

Summoned by the Federation council, your assignment is to use a prototype matter transporter to infiltrate the alien cruiser. Armed with a particle beam disrupter, lasers and whatever the alien habitat can provide, you must cripple the alien vessel thus enabling its destruction.

What awaits? What technological perils and strange diabolic adversaries will try to thwart you in your mission?

Can you become Drak the Last of the Obliterators? Can you survive? Can you overcome such unthinkable odds?

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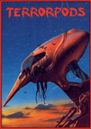

TERRORPODS

Its been a long watch . . . As the sun disappears over the horizon, the uninviting, grey bleakness of Collan becomes apparent. Following the intense heat of the day, the onset of night adds the bitterness of sub-zero temperatures to an already hostile environment, and the stark interior of the D.S.V. appears almost homelike.

Deep melancholy is suddenly smashed by the shrill scream of a siren. The status panel has gone crazy, an extraordinary array of lights flash uncontrollably. Good grief . . . what's happening?

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